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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/721,849

11/25/2003

Joel A. Kubby

D/A1063D

6941

7590

10/19/2004

OLIFF & BERRIDGE, PLC  
P.O. BOX 19928  
ALEXANDRIA, VA 22320

EXAMINER

WOOD, KEVIN S

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

10/721,849

Applicant(s)

KUBBY ET AL.

Examiner

Kevin S Wood

Art Unit

2874

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 28 September 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY** [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.  
ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.  
2. ☐ The proposed amendment(s) will not be entered because:  
(a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ they raise the issue of new matter (see Note below);  
(c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_

3. ☒ Applicant's reply has overcome the following rejection(s): See Continuation Sheet.  
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
5. ☐ The a) ☐ affidavit, b) ☐ exhibit, or c) ☐ request for reconsideration has been considered but does NOT place the application in condition for allowance because: \_\_\_\_\_.  
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.  
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

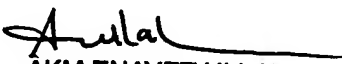
Claim(s) allowed: \_\_\_\_\_

Claim(s) objected to: \_\_\_\_\_


Claim(s) rejected: 1-13, 15 and 16.

Claim(s) withdrawn from consideration: \_\_\_\_\_

8. ☐ The drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.  
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.  
10. ☐ Other: \_\_\_\_\_

  
AKM ENAYET ULLAH  
PRIMARY EXAMINER

Continuation of 3. Applicant's reply has overcome the following rejection(s): claims 8-11 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,625,356 to Ticknor et al..

  
AKM ENAYET ULLAH  
PRIMARY EXAMINER

## **ADVISORY ACTION**

### ***Response to Amendment***

1. This action is responsive to the After-Final Amendment filed on 28 September 2004. Claim 8 has been amended and claim 14 has been cancelled. Claims 1-13 and 15-16 are pending in the application.

### ***Response to Arguments***

2. Applicant's arguments, filed 28 September 2004, with respect to the rejection(s) of claim(s) 8-11 under 35 U.S.C. 102(e) in view of U.S. Patent No. 6,625,356 (Ticknor et al.) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made under 35 U.S.C. 103 in view of U.S. Patent No. 4,859,022 (Opdahl et al.).

3. Applicant's arguments filed 28 September 2004 with respect to claims 1-7 and 12-16, being rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,859,022 to Opdahl et al., have been fully considered but they are not persuasive. The applicant's primary argument is that the Opdahl et al. reference discloses optical fibers instead of disclosing optical waveguides as claimed in claims 1-13 and 15-16. The applicant goes on to argue that optical fibers are not optical waveguides. The examiner respectfully disagrees with this argument. Optical fibers are by definition a specific type of optical waveguide, and are even classified as such by the U.S. Patent Office. The optical fibers disclosed by the Opdahl et al. reference clearly meet

the optical waveguide limitations as claimed in claims 1-13 and 15-16. The fibers within the Opdahl et al. reference clearly function as waveguides for guiding light.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-13 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,859,022 to Opdahl et al. This new rejection of claims 1-7 was necessitated by the Applicant's Amendment filed on 28 May 2004.

Referring to claim 1, Opdahl et al. discloses a micro-optical device having an aligned waveguide switch, comprising: a stationary input part with a plurality of input waveguides (500,600); a stationary output part with a plurality of output waveguides

(501,601); a movable part (93) with a plurality of switching waveguides, the movable part being movable relative to the stationary input and output parts. Opdahl et al. does not specifically disclose at least one stop block that limits movement of the movable part to align at least one of the switching waveguides with at least one of the input waveguides and at least one of the output waveguides in the embodiment within Fig. 3a and 3b. However, Opdahl et al. does disclose at least one adjustable stop block (124) in the embodiment shown in Fig. 1c and Fig. 1b, where the purpose of the stop block is to limits movement of the movable part to align at least one of the switching waveguides with at least one of the input waveguides and at least one of the output waveguides. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a stop block within the optical switch disclosed in Fig. 3a and Fig. 3b of the Opdahl et al. reference in order to stop the movement of the movable part (93) at a point where the movable waveguides are in alignment with the stationary waveguides.

Referring to claims 2, 15, and 16, Opdahl et al. discloses all the limitations of the claimed invention, except Opdahl et al. does not appear to specifically disclose that the stationary input part, the stationary output part and the movable part comprise a single-crystal-silicon layer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a single-crystal-silicon to form the parts, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416.

Referring to claim 3, Opdahl et al. discloses all the limitations of the claimed invention, except Opdahl et al. does not appear to specifically disclose that the stop

Art Unit: 2874

blocks comprises a single-crystal-silicon layer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a single-crystal-silicon to form the stop block, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416.

Referring to claims 4 and 6, Opdahl et al. discloses all the limitations of the claimed invention, except Opdahl et al. does not appear to specifically disclose that the stop blocks comprises a polysilicon layer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use polysilicon layers to form the stop blocks, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416.

Referring to claims 5 and 7, Opdahl et al. discloses all the limitations of the claimed invention, except Opdahl et al. does not appear to specifically disclose that the bumper comprises a polysilicon layer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a polysilicon layer to form the bumper, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416.

Referring to claims 8-14, Opdahl et al. discloses all the limitations of the claimed method. Opdahl et al. discloses a method of fabricating a micro-optical device having an aligned waveguide switch, comprising: forming a stationary input part with a plurality

Art Unit: 2874

of input waveguides (500,600); forming a stationary output part with a plurality of output waveguides (501,601); a movable part (93) with a plurality of switching waveguides (551,552,553,554), the movable part being movable relative to the stationary input and output parts; and forming at least one stop block (124) that limits movement of the movable part to align at least one of the switching waveguides with at least one of the input waveguides and at least one of the output waveguides. See Fig. 1a through Fig. 3b, along with their respective portions of the specification. Opdahl et al. discloses all the limitations of the claimed invention, except Opdahl et al. does not appear to specifically disclose that the stationary input part, the stationary output part and the movable part comprise a single-crystal-silicon layer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a single-crystal-silicon to form the parts, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416.

### **Conclusion**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin S Wood whose telephone number is (571) 272-2364. The examiner can normally be reached on Monday-Thursday (7am - 5:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney B Bovernick can be reached on (571) 272-2344. The fax phone

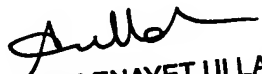


Art Unit: 2874

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KSW

  
AKM ENAYET ULLAH  
PRIMARY EXAMINER